

1853.  
Descriptive Catalogue

OF THE

AMERICAN SEED GARDEN,

WETHERSFIELD, CONN.,

Established in the Year 1838.



JOHNSON, ROBBINS, & CO.,  
PROPRIETORS.

---

WETHERSFIELD:

ELISHA JOHNSON—S. W. ROBBINS.

E. G. ROBBINS.

1853.

# TO THE PUBLIC.

---

AMERICAN SEED GARDEN, }  
WETHERSFIELD, Ct., Oct., 1853. }

THE proprietors of this establishment take pleasure in presenting the accompanying Catalogue, not only with the view of showing the extent of their operations, but to furnish the purchasers of seeds with some of the leading directions for their cultivation.

The garden is located about three miles below Hartford, and has been established fourteen years. The proprietors attend in person to all the labors of cultivation, packing, and the fulfilment of orders; and from the well-known superiority of seeds grown in a northern climate, they feel assured in *warranting* theirs to be *fresh* and *pure*.

The seeds are supplied in bulk, or in papers, neatly put up and labelled, and packed in boxes of any size suitable for city or country trade, with appropriate directions for cultivation. Those intended for Mexican or Californian trade are put in bottles or tin cases, and hermetically sealed, in order that they can be safely transported any distance through divers climates, without injury from the voyage.

All orders will be punctually executed, and delivered on board the Steamboats, at the Railroad Dépôt, or at the Express Offices in Hartford, whether addressed to the proprietors by mail or otherwise, accompanied by the money, or a draft realizable at sight or acceptance on some responsible house in Hartford, Boston, Philadelphia, or New York.

Wholesale Price Catalogues will be sent gratis, on all applications made by mail or otherwise, provided they are post-paid.

**JOHNSON, ROBBINS, & CO.,** Proprietors.

---

ENTERED according to Act of Congress, in the year 1853, by

**JOHNSON, ROBBINS, & CO.,**

In the Clerk's Office of the District Court of the United States for the District of Connecticut.

## INTRODUCTION.

---

A PRODUCTIVE garden is not only a luxury and source of enjoyment to the farmer, or man of wealth, but it is also a constant source of amusement, and supplies many of the wants of the mechanic, as well as of the poor. No laboring man, whether agriculturist or mechanic, is so unceasingly occupied that he cannot spare half an hour each day for his garden ; and no professional man, nor any other one confined to in-door employment, who has the command of a rod of ground, ought to be without the exercise and the exertion required for keeping a small garden in good order. His wife and children will be benefited by the light labor of a garden, and the mechanic will, by such occasional change from his ordinary employment, secure more constant and vigorous health. The sowing and the cultivation of his vegetables, the blossoming of his trees, and the gathering of his fruits and flowers, will all afford interest and gratification. It is an amusement to be coveted beyond all others, and leads to nothing but good—to nothing sensual or vicious. It cannot give rise to bad habits, but, on the contrary, will serve to protect a man from the allurements of dissipation and vicious indulgence. A garden, in fact, is essential to the health, and comfort, and well-being of the mechanic and the day-laborer ; and it may also be said to be essential to the comfort and enjoyment of individuals of every class.

In the case of the journeyman, or day-laborer, what can be so delightful as half an hour spent in his garden, with his wife and children around him, after his daily toil ? The change from laborious exertion, to the lightest of all out-door employments, must be to him a relief.

To the farmer, too, as well as to the professional man, how many broken hours will pass unemployed, and perhaps without

enjoyment, if he has not a garden in which to occupy his time, and in which he may occasionally try experiments on a small scale, either for amusement, or for verifying the experiments of others, before carrying them into practice on his farm!

Again, children are frequently led into mischief in the absence of other means of occupying themselves. How different would it be if they were taught to turn their attention to the neatness and productiveness of a garden! They would then be anxious to show their parents how usefully they could be employed. And what an instructive lesson would it be for them to find the luxury of flowers and fruit rewarding, in due season, their industry and care! How delightful to see them advising and assisting each other to obtain such an object! How peaceful and innocent is such an amusement, and what a contrast does it present to rudeness, quarrelling, or idling away their hours in riotous games!

#### Selection of the Site.

In selecting the situation of a garden, the soil is of secondary importance, for in this respect it will improve every year, by trenching, draining, manuring, or by bringing good earth to the favorite spot. Indeed, some persons choose a heavy, moist, or wet soil for a garden, in order to show their skill and perseverance in its improvement, to which nothing more contributes than trenching the ground deep, and throwing it up into rough ridges for the frost to act upon during the winter, and the sun in summer and early spring. The soil, in all cases, when properly prepared, should be deep and rich, and dry and friable enough to admit of culture a day or two after a rain, and tenacious enough to withstand a drought.

The garden, however, ought to have a southern aspect in a northern climate, and it is desirable that it should be within sight of the house. If possible, a small stream of water should be brought into the garden by means of a water ram, or otherwise, which will be a great convenience for watering in dry weather. If a stream is not at hand, water may be caught in cisterns from the farm buildings, and distributed to the plants by means of gutters or pipes.

The garden should also be well protected from animals and tempestuous winds by a substantial inclosure, consisting either

of a good wall of earth, stone, or brick, or by a tight board fence or quickset hedge. If it be of a good size, and properly attended to, it will afford an abundance of fruit for family use. Cherry and plum trees may be planted nearest the house, as they are not so liable to be attacked by pilferers and birds; summer pears and apples next, and winter and baking sorts farthest off. Gooseberries, currants, and strawberries will grow between the standard trees, or around the plots of vegetables. Raspberries and flowers may be planted along the borders and walks. Peaches, apricots, nectarines, vines, and figs may be trained on the sunny sides of the buildings or walls.

Flowers should be cultivated in every garden, especially if it be near the house; in which case, if not in every other, the space certainly ought not to be limited to the production of vegetables alone, but should contain the ornamental as well as the useful. Too much time and space, however, must not be devoted to flowers. Over the porch or around the door of the house, a few hardy, tall-growing roses may be trained for ornament. Common monthly or China roses may cover the corners of the house, or may be trained under and along the sides of the windows, mixed with laurestinus, arbutus, morning glory, and nasturtium; nor let the honeysuckle or trumpet creeper be wanting in some corner, twisted around a pillar or tree, or hanging over a corner of the wall. Have plants of the hundred-leaved, moss, cabbage, variegated, and common blush roses, in the corners of the garden nearest the house. If the flower borders be edged with the garden daisy, the pansy, or heart's-ease, verbenas, and the hardy sorts of auriculas, there will be few days in the season in which some pretty little flower will not peep forth, and afford pleasure in looking at it. A box, laurel, or rhododendron will do well under shade, and their perpetual green will refresh the eye when the leaves of other plants and trees are dead.

Children should early imbibe a taste for flowers, for they do the heart good, and impart a kindly tone of feeling and refinement, and serve to keep out evil thoughts. They should be taught to plant the seeds and roots, to weed and keep them clean, and to train and cultivate them; and the taste will remain with them when they grow old. It is on such objects as these, in the recollection of bygone days, that local attachment is founded, making us delight to visit the scenes of our child-



hood, and bringing back the wanderer from distant climes, to seek a last resting-place in the home of his fathers.

### Garden Implements.

In the selection of implements, those of the best quality should be sought, and nothing purchased merely because it can be bought for a low price. The *cheapest* is the best, the most durable, and best calculated to accomplish the desired end. The materials of which they are constructed are chiefly wood, iron, and steel. The parts composed of the latter materials should be wiped clean and bright immediately after using, and should never be suffered to rust. The handles or other parts of wood should be oiled at least once a year, and every tool should be housed when not in use, and kept in its proper place.

The implements usually employed in conducting a garden on a moderate scale are as follows, and may be purchased at the agricultural warehouses in all large cities and populous towns:—

	Cost.
Wheelbarrow, .....	\$1 50 @ \$6 00
Spade, .....	0 75 @ 1 12½
Fork (strong four-tined), .....	1 00 @ 2 50
Shovel, .....	0 75 @ 1 12½
Levelling Rake, .....	0 31 @ 1 25
Weeding Rake, .....	0 50 @ 0 62½
Common Field Hoe, .....	0 37½ @ 1 00
Weeding Hoe, .....	0 37½ @ 0 62½
Reel and Line, .....	0 75 @ 1 00
Sowing Tube (a bottle will do), .....	0 12½ @ 0 25
Dibble, .....	0 06½ @ 0 12½
Trowel, .....	0 37½ @ 0 62½
Garden Syringe, .....	1 00 @ 2 50
Watering Pot, .....	0 37½ @ 1 00
Hand Glasses or Hand Frames, .....	0 25 @ 1 50
Grass Edging Knife, .....	0 75 @ 1 00
Pruning Knife, .....	0 50 @ 0 75
Pruning Saw, .....	0 62½ @ 0 87½
Grafting and Budding Knife, .....	0 50 @ 0 75
Bill or Brier Hook, .....	1 12½ @ 1 50
Garden or Hedge Shears, .....	1 25 @ 1 50
Flower Scissors, .....	0 62½ @ 1 00
Fruit Ladder, .....	1 50 @ 5 00

Those who are engaged in gardening on a more extensive scale will facilitate or economize their labors by means of hot beds, ploughs, harrows, rollers, seed sowers or drill barrows, cultivators, garden engines, fruit gatherers, potato diggers, &c., &c

### Fertilizers and Manures.

There are so many kinds of manures, and such a variety of modes of applying them, that it would be useless to attempt a description of them here. To those who are in want of information on this subject, we would recommend Browne's "American Muck Book," in which is described every kind of available fertilizer, with minute directions for its application.

As a general practice, stable or barnyard dung, sufficiently rotted to destroy the vitality of the seeds of weeds and other foul plants contained in it, well incorporated in the soil, perhaps, is the best manure that can be applied to a garden. A compost made of a mixture of the dung of various kinds of animals, and the refuse or decaying parts of garden vegetables, or the leaves of trees, doubtless, is the most appropriate manure that can be applied. In cases where these manures cannot be obtained, guano, poudrette, bonedust, superphosphate of lime, charcoal, plaster, oyster-shell lime, common salt, and dressings of soot, wood ashes, soapsuds, or other liquid manures, may be used with advantage instead. All of these, however, should be cautiously employed, as a misapplication would often be followed with injurious results.

### Selection and Application of Seeds.

In selecting seeds, the first thing to be attended to is to choose the best to be had, and, if possible, obtain them from a responsible seedsman. Never buy those which are "cheap" because they cost less, for they will prove the "dearest" in the end.

In order to test the vitality of seeds, sow a few in a pot or box of earth, and keep it warm and moist, exposed to the sun for a while, and, if good, they will begin to sprout and grow.

Onion seed, soaked a few minutes in cold water, and then boiled for half an hour in hot water, will begin to germinate if vitality remains.

Indian corn, peas, and numerous other seeds, soaked four hours in a tepid solution of chloride of lime and water, mixed in the proportion of one fourth of an ounce of the lime to a gallon of water, and then sown in the ordinary way, have been known to throw out germs in twenty-four hours.

The seeds of common garden cress, immersed in oxygenated muriatic acid, will germinate in six hours; whereas, when immersed in water alone, they will not show signs of vegetation in less than thirty hours.

Steeping in tepid water for twenty-four to forty-eight hours, and then coating them in plaster or ashes, will hasten the germination of most dry and hard seeds.

Seeds may be safely kept in boxes or bags, in a dry, airy place, out of the reach of rats and other vermin, for at least two years. Many kinds may be thus preserved from three to five years. If kept in cellars or damp wall closets, or transported far by river or sea, they should be soldered or sealed up tight in tin cases or glass jars.

The following table shows the quantity of seeds usually sown in a garden of half an acre, which will supply a moderate-sized family with vegetables during the year:—

Asparagus, .....	1 oz.
Beans, an assortment, .....	3 quarts.
Beets, an assortment, .....	4 oz.
Broccoli, .....	$\frac{1}{2}$ oz.
Cauliflower, .....	$\frac{1}{2}$ oz.
Cabbage, an assortment, .....	4 oz.
Celery, .....	$\frac{1}{2}$ oz.
Cress, .....	8 oz.
Cucumber, .....	$\frac{1}{2}$ oz.
Carrot, .....	1 oz.
Early Corn, .....	1 quart.
Egg Plant, .....	1 paper
Endive, .....	$\frac{1}{2}$ oz.
Leek, .....	$\frac{1}{2}$ oz.
Lima Beans, .....	1 quart.
Lettuce, an assortment, .....	1 oz.
Mustard, .....	4 oz.
Melons, .....	$\frac{1}{2}$ oz.
Okra, .....	$\frac{1}{2}$ oz.
Onions, an assortment, .....	2 oz.
Parsley, .....	1 paper.
Parsnips, .....	1 oz.
Peppers, .....	1 paper.
Potatoes, .....	1 bushel.
Pumpkin, .....	$\frac{1}{2}$ oz.
Peas, .....	8 quarts.
Radish, .....	8 oz.
Salsify, .....	$\frac{1}{2}$ oz.
Squash, .....	$\frac{1}{2}$ oz.
Spinach, .....	8 oz.
Tomatoes, .....	1 paper.
Turnip, .....	2 oz.
Pot and Sweet Herbs, .....	6 papers.

By other calculations, a pint of peas will sow fourteen yards in a drill; a pint of small beans will sow twenty-two yards in a drill; an ounce of onion seed will sow ten square yards;



half an ounce of leek seed will sow six square yards ; an ounce of carrot seed will sow ten square yards ; an ounce of parsnip seed will sow twelve square yards ; half an ounce of cabbage, broccoli, or cauliflower seed, will sow from three to four square yards.

The quantity of seed usually sown broadcast, per acre, is as follows :—

Beans, .....	2 to 3 bushels.
Peas, .....	2½ to 3½ bushels.
Mustard, .....	8 to 20 quarts.
Flat Turnip, .....	2 to 3 lbs.

The following table shows the quantity of seeds commonly sown to an acre, in rows or drills :—

Beans, .....	1½ to 2 bushels.
Peas, .....	1½ to 2 bushels.
Potatoes, .....	3 to 25 bushels.
Onions, .....	4 to 5 lbs.
Carrots, .....	2 to 2½ lbs.
Parsnips, .....	4 to 5 lbs.
Beets, .....	4 to 6 lbs.

EIGHT-ROWED YELLOW CORN.				
Distance of hills apart.			Quantity required, 4 grs. to a hill.	Quantity required, 5 grs. to a hill.
Feet.	by	Feet.	Quarts.	Quarts.
3	by	2	14	18
3	"	3	9	12
3½	"	3	8	10
3½	"	3½	7	8
4	"	3	7	9
4	"	3½	6	7
4	"	4	5	6

### Periods of Sowing.

It has long been observed that Nature, in her operations, is so uniform that at the periods in which certain trees unfold their flowers and leaves, is an unerring indication of the forwardness of spring ; and that the time at which our common cultivated fruit trees put forth, with few exceptions, is the proper season for sowing gardens in open culture. Thus the following table will serve as a guide for some of the principal places in the Union :—

Places.	Peach Tree.	Cherry Tree.	Apple Tree.
Cambridge, Mass.,.....	May 5th to May 10th.	May 4th to May 15th.	May 15th to May 25th.
New Haven, Ct.,.....	April 29th to May 7th.	May 1st to May 7th.	May 10th to May 21st.
Perth Amboy, N. J.,...	April 16th to April 26th.	April 23d to April 29th.	May 1st to May 7th.
Sandusky, Ohio,.....	April 12th to April 25th.	April 21st to April 28th.	April 23th to May 7th.
Philadelphia,.....	April 20th to April 30th.	April 25th to May 7th.	May 1st to May 10th.
King George C. H., Va.,	April 1st to April 12th.	April 6th to April 11th.	April 15th to April 19th.
Natchez, Miss.,.....	January 6th to March 1st.	January 23d to March 3d.	March 4th to March 17th.
St. Mary's, Ga., and southward,.....	October 21st to February 20th.	..... .....	October 21st to February 20th.

Table for Planting Corn, Trees, etc.

The following table may be useful for readily pointing out the number of hills of potatoes and corn, or of plants and trees, &c., required for an acre of land, when planted at any of the undermentioned distances apart:—

Distances apart.		No. of Plants.
$\frac{1}{2}$ ft. by	$\frac{1}{2}$ ft.,	
1 " 1 "	1 " 1 "	174,240
1 $\frac{1}{2}$ " 1 $\frac{1}{2}$ "	1 " 1 " .....	43,560
2 " 1 "	1 " 1 " .....	19,360
2 " 2 "	2 " 1 " .....	21,780
2 $\frac{1}{2}$ " 2 $\frac{1}{2}$ "	2 " 2 " .....	10,890
3 " 1 "	1 " 2 " .....	8,960
3 " 2 "	2 " 2 " .....	14,520
3 " 3 "	3 " 2 " .....	7,260
3 $\frac{1}{2}$ " 3 "	3 " 3 " .....	4,840
4 " 1 "	1 " 3 " .....	3,555
4 " 2 "	2 " 3 " .....	10,890
4 " 3 "	3 " 3 " .....	5,445
4 " 4 "	4 " 3 " .....	3,630
4 $\frac{1}{2}$ " 4 $\frac{1}{2}$ "	4 " 4 " .....	2,722
5 " 1 "	1 " 4 " .....	2,151
5 " 2 "	2 " 4 " .....	8,712
5 " 3 "	3 " 4 " .....	4,356
5 " 4 "	4 " 4 " .....	2,904
5 " 5 "	5 " 4 " .....	2,178
5 $\frac{1}{2}$ " 5 $\frac{1}{2}$ "	5 " 5 " .....	1,742
6 " 1 "	1 " 5 " .....	1,417
6 " 2 "	2 " 5 " .....	1,210
6 $\frac{1}{2}$ " 6 $\frac{1}{2}$ "	6 " 5 " .....	1,031
7 " 1 "	1 " 6 " .....	888
8 " 1 "	1 " 7 " .....	680
9 " 1 "	1 " 8 " .....	537
10 " 1 "	1 " 9 " .....	435

# DESCRIPTIVE CATALOGUE.

---

## ARTICHOKE.

<i>Cynara scolymus</i> .....	Or	BOTANISTS.
Artichaut,.....		FRENCH.
Alcachofa,.....		SPANISH.
Artischoke,.....		GERMAN.

THE artichoke, when cultivated in a suitable soil, is a perennial; but after the fourth or fifth year, the heads become smaller and drier, and are unfit for use. The edible part consists of the fleshy substance on the bottom of the scales of the immature flower heads, which, to render palatable, may be dipped in butter or other sauce, or they may be eaten as a salad in a raw state.

The two principal varieties are the *Globe* and the *French* or *Green*. The globe is considered the best for general use.

CULTIVATION.—This plant may be propagated from seeds, or by a division of the suckers, which are annually afforded by the parent stocks in the spring. The suckers are ready to slip or cut off as early in the season as they have formed a few roots and leaves. They may be planted about three feet apart each way, in a light warm soil, well pulverized and manured. If the weather continue dry, they must be frequently watered until they strike root. During the season they must be constantly hoed, and, at the approach of winter, remove all decayed leaves; and in all regions north of the Potomac, protect the roots from the effects of frost by covering them with litter or the boughs and leaves of pine or hemlock spruce. If the climate is very severe, the leaves may be covered with earth. In early spring, the litter may be removed, the earth levelled down, and the ground enriched by well-rotted manure. No vegetable is more benefited than the artichoke by

the application of seaweed, or some other manure containing common salt. If the heads are not wanted for the table or for seed, they should be removed from the stem, as this would greatly promote the strength and durability of the plant.

The seeds may be sown early in the spring—say at the time of the flowering of the peach, (see table on page 8,) in drills eighteen inches apart, and covered from an inch and a half to two inches deep. If properly cultivated, good plants may be obtained the first season, which must be protected during the winter as above, and transplanted in the spring. They will produce a few heads the second year, only one of which should be allowed to grow on each stalk. The third and succeeding years they may be allowed to produce a regular crop.

---

## ASPARAGUS.

<i>Asparagus officinalis</i> ,.....	OF BOTANISTS.
Asperge,.....	FRENCH.
Esparragos,.....	SPANISH.
Spargel,.....	GERMAN.

THE asparagus is a hardy perennial, of universal cultivation, and every year is coming more and more into use. There are only two distinct varieties, the *Purple-topped* and the *Green-topped*. The former is most esteemed, and may be distinguished by the closeness of its heads, which is of a purple reddish-green color soon after it springs forth. The supposed variety, called the "Giant," on account of its size, owes its excellence chiefly to superior cultivation.

PROPAGATION AND CULTURE.—This plant can only be propagated by seeds; but when a new bed is formed, time may be saved by procuring strong one-year-old plants from some gardener, and plant them as soon as possible, without exposure to the air, in drills, one foot apart, and nine inches from plant to plant, in finely-prepared beds, four or five feet wide, with the crown of the roots two inches below the surface, drawing the earth over them to keep them in place.

The best period for sowing is in early spring, say at the time of the flowering of the peach tree (see table on page 8). The seed should be thinly sown in drills, from one and a half

to two inches deep, and eighteen inches from drill to drill. The ground should be a rich sandy loam, well pulverized and manured. In the course of the season, the young plants should be frequently hoed and kept free from weeds. In regions subject to severe frosts, the roots should be protected in winter with a covering of litter, to be applied late in the fall.

The ground for an asparagus bed can scarcely be made too rich. It should be spaded or trenched at least two spades deep, and thoroughly intermixed with half-rotted manure. From twenty-five to thirty pounds of common salt should be applied to each square rod of ground, well incorporated in the soil to a depth of four or five inches. The beds may then be formed, and planted as directed above, and during the second summer, no further care will be required than keeping the plants clear of weeds. The following winter, if the climate requires it, cover them with rotten manure to a depth of three or four inches, to protect the crowns from frost. The first two years, the plants may be allowed to run up to stalks, in order that vigorous crowns may be formed for the succeeding crop.

After the third year, the stalks should be annually cut down quite to the ground, late in the autumn, where the climate is severe, and a dressing of well-rotted manure spread over the roots to the depth of three inches, with the double object of protecting them from frost, and for fertilizing the soil. As soon as the ground opens in the spring, the covering of manure should be forked or spaded in, to a depth of three or four inches, taking due care not to wound the crown of the roots. Then evenly level the surface of the beds with a rake, and a full crop may be expected to rise. As soon as the shoots reach three or four inches above the ground, scrape away a little earth, and cut them off in a slanting direction, about three inches below the surface, taking care not to wound the advancing buds. Do not extend the cutting beyond the month of May.

---



## ENGLISH WINDSOR BEAN.

<i>Vicia faba</i> ,.....	OF BOTANISTS.
Fève de marais,.....	FRENCH.
Haba de Windsor,.....	SPANISH.
Puff bohne,.....	GERMAN.

THE French or Windsor bean is not much cultivated in this country, owing to the extreme heat of our summers. In the middle and northern regions of the United States, it is necessary to plant them as early in the spring as the ground will admit of being worked, in order that they may come into flower before the weather becomes hot; otherwise the blossoms fall off, and there will be no yield.

The two principal varieties are the *Broad Windsor* and the *Early Long Pod*. The latter is preferred.

CULTIVATION.—Plant in drills eighteen inches asunder, and two or three inches in the rows.

## KIDNEY DWARF OR BUSH BEAN.

<i>Phaseolus vulgaris</i> ,.....	OF BOTANISTS.
Haricot nain,.....	FRENCH.
Frijol,.....	SPANISH.
Schminkbohne,.....	GERMAN.

THIS vegetable is regarded as one of the chief requisites of the garden for summer culture, and forms an every-day dish, under the names of "String and Shelled Beans," "Succotash," &c.

The following are the principal varieties:—

1. *Early China*.—This is a prolific bearer, and is much esteemed for field culture. It is much used for snaps or string beans, shelled, green or dry.

2. *Early Valentine*.—This is another good bearer, with brittle, round pods, which continue a long time suitable for cooking.

3. *Early Yellow Six Weeks*.—This is an excellent variety, similar in growth and maturity to the *Early Valentine*, but smaller. Used for snaps.

4. *Early Mohawk*.—This is a hardy variety that will bear early planting, and even light frosts, without injury. It is a prolific bearer, and produces a long time, if the green pods are frequently picked.

5. *Large White Kidney, or Royal Dwarf*.—This is an excellent variety, and is indispensable for family use, both in a green or in a dry state.

6. *Early Refugee, or Thousand-to-One*.—This variety, which is sometimes called "Purple, Speckled Valentine," is of a strong growth, and resembles the Early Valentine when green.

7. *Early Horticultural*.—This variety is very productive, and is of superior excellence both green and dry.

CULTIVATION.—Any of the forenamed varieties may be planted from the period of the flowering of the peach-tree, (see table on page 8,) to the middle of July; and in all places south of St. Mary's, in Georgia, as a general rule, they may be sown in every month in the year.

The soil should be light and rich, well worked with the spade or plough. The seeds may be planted in hills, two and a half feet apart; or they may be sown in drills two and a half inches deep, from twelve to eighteen inches apart from drill to drill, and two inches from each other in the drills. As soon as the plants are three inches high, they should be carefully weeded and the earth drawn up towards their stems. As they begin to show their flower buds, give them a second "earthing-up."

Many prefer to plant these beans in hills, on account of their branching habit.

---

## POLE BEANS, OR RUNNERS.

<i>Phaseolus multiflorus</i> , &c.	OF BOTANISTS.
Haricot a rames, &c.	FRENCH.
Judias, &c.	SPANISH.
Stangenbohne, &c.	GERMAN.

*P.*

AMONG this class of beans there are a number of esteemed sorts, which are extensively cultivated for all our northern markets, as well as for private use.

The following are the varieties usually grown for culinary use :—

1. *Early Dutch Case-Knife*.—This is a productive bearer, of fine flavor, and may be used as snaps or shelled. It is well adapted for winter.

2. *Sewee, Sieva, Saba or Carolina Bean*.—This variety resembles the Lima bean in all its habits, but is smaller and more hardy. It yields profusely, and is well adapted for a southern climate.

3. *Large Lima or Butter Bean*.—This variety, so much esteemed on our tables, is of very tender habit, not bearing the slightest frost. The seed is apt to rot in the ground when planted very early; and, unless the *eye is placed downward*, it is liable not to come up at all. It runs very high, and yields abundantly until killed by frost or is dried up by the sun.

4. *Scarlet Runner*.—This variety is highly ornamental from the color and profusion of its flowers, and is very delicate in its flavor when cooked, either shelled, or in the pod. In the Middle and Southern States, it bears so sparingly in most seasons, that it is scarcely worth cultivating for culinary use.

5. *White Dutch Runner*.—This runner does not differ much from the preceding variety, except in the color of the flowers and seeds, which are white.

6. *White Cranberry*.—This bean is very tender, and of a rich flavor, when green; but it is less productive than the Red variety.

7. *Red Cranberry*.—This variety is of similar habit as the White, and is more prolific, but less tender when green.

CULTIVATION.—As a general rule, all the above-named varieties may be planted at the period of the flowering of the peach-tree (see table on page 8). Those adapted for the regions south of St. Mary's, in Georgia, may be planted in every month in the year. Occasionally, the less hardy kinds will be cut off by damp weather or frost; if so, replant.

The soil should be rich and warm, and raised above the surface in slightly-elevated beds. The preferable mode of planting is in hills, about three feet apart, treated in almost every respect like Indian corn. In planting the large-seeded varieties, as the "Lima," the following precaution should be strictly observed, namely, *place the eye of the bean downward*; otherwise, it will not be liable to come up. The "Runners" should be planted with the eyes up. At the last hoeing, rods

or poles, twelve feet in length, should be firmly stuck into each hill for the vines to run upon.

## BEET.

<i>Beta vulgaris</i> ,.....	OF	BOTANISTS.
Betterave,.....		FRENCH.
Remolacha, .....		SPANISH.
Rothe Rube,.....		GERMAN.



THIS esculent is universally cultivated, and is used for culinary purposes in all stages of its growth. The varieties most essential for the table and for stock are as follows:—

1. *Early Blood Turnip*.—The quality, in richness of color, and closeness of grain, is superior. It is very tender, juicy, and is good for early use and late keeping.

2. *Extra Early Flat or Bassano*.—This is a very tender and juicy variety, and is cultivated generally for early use. When sown late, it will keep during the winter.

3. *Early Yellow Turnip or Orange*.—This is an excellent variety, serving both for summer and winter use.

4. *Early Scarcity*.—This variety resembles the “Scarcity or Mangel-wurzel Beet.” Its chief difference consists in its turnip shape, smaller tops, and earlier growth.

5. *Mangel-wurzel or Scarcity*.—The first of these appellations is the German name for this vegetable; the latter is so called from an idea of its being a good preventive of *scarcity*, or a substitute for grass, in feeding stock. The roots are much larger than the common varieties, and grow chiefly above the surface of the ground.

6. *Smooth Long Dark Blood*.—This is one of the most esteemed sorts, both for its yield and culinary use. It has also the property of keeping well.

7. *Long Blood Red*.—This is another excellent variety, sweet, tender, yielding well, and good for winter use.

8. *White Sugar*.—This, like the Mangel-wurzel, is of large size, growing considerably above ground, and is used for feeding stock. In France and Germany, it is much cultivated for the production of sugar.

CULTIVATION.—Beets should be sown early in the spring,

say at or before the time of the flowering of the peach tree (see table on page 8). A good method is to set the seed in squares of about eight or nine inches, and if a fourth part of them fail, the crop will not be lessened. The Scarcity varieties should stand a foot apart in two-foot drills.

Beets require a mellow, warm soil, moderately rich, and well pulverized to a good depth; for, as the long-rooted varieties naturally run deep, if they are sown in shallow ground, they will grow short, stringy, and of irregular shape. When the seeds are strong and good, they are apt to come up double. In this case, they should be singled while they are young. Otherwise, it may be expected that the roots will be small, and sometimes twisted about each other. Those which are taken out, may be transplanted; but they are not liable to make good roots. The plants should be hoed two or three times, after which, the leaves will so cover the ground as to stop the further progress of the weeds. The roots should be harvested before the occurrence of severe frosts. None of the fibrous roots should be removed; nor should the tops be cut off very close.

---

## BROCCOLI.

<i>Brassica oleracea</i> ,.....	Or	BOTANISTS.
Brocoli, .....		FRENCH.
Brocoli, .....		SPANISH.
Italienische Spargelkohl, ...		GERMAN.

THIS is a species of cabbage, nearly related to the cauliflower, but not of so delicate a flavor. It is hardy and more sure to head, and may be successfully cultivated in a mild climate from November till March. The following are the principal varieties cultivated in this country:—

1. *Early White*.—This variety is suitable for the southern parts of the United States, where it will grow and head during the winter, in open culture.

2. *Early Purple*.—This sort is known by its compact, large-sized heads, and may be cultivated as above.

3. *Large Purple Cape*.—This variety also produces large-sized heads, and from its early growth, is better adapted to the climate of the North.



4. *White Cape or Cauliflower*.—This kind is later than the preceding, and when properly cultivated nearly resembles the cauliflower.

CULTIVATION.—The seeds may be sown at the period of the flowering of the common orchard fruit trees, (see table on page 8,) in a rich soil, in an open exposure. In regions south of St. Mary's, in Georgia, they may be sown from October till March. Sow broadcast, somewhat thick, and tramp down the earth, if dry, and lightly rake over the surface. If the weather continue dry, water the beds occasionally until the young plants appear. Transplant in moist weather, in rows, two feet apart, and twenty inches from plant to plant. If drought follow, water them every other day until they revive. In other respects, cultivate as cabbages.

The heads should be harvested while they remain close. In the North, they may be preserved during the winter in cellars, or otherwise, with cabbages.

---

## BRUSSELS SPROUTS.

<i>Brassica oleracea bullata</i> ,.....	OF BOTANISTS.
Chou de Bruxelles,.....	FRENCH.
Col de tallo de Bruselas,	SPANISH.
Sprossen Kohl, .....	GERMAN.

THIS is a variety of cabbage, used for fall and winter greens. The leaves to the plant are similar to those of the Savoy, crowning a stem about two feet high, from which numerous small heads, one or two inches in diameter, put forth.

CULTIVATION.—The seeds may be sown at the period of the flowering of the peach-tree (see table on page 8); and as soon as the plants are of a suitable size, they may be transplanted from eighteen to twenty inches apart, and cultivated in other respects as cabbages.

## CABBAGE.

<i>Brassica oleracea</i> , .....	OF BOTANISTS.
Chou pomme, .....	FRENCH.
Col. Berza, .....	SPANISH.
Kopfkohl, .....	GERMAN.

THIS esculent, in so high estimation, is very excellent food both for man and animals. The varieties most generally cultivated are as follows:—

1. *Early York*.—Esteemed for its early growth and delicate flavor.

2. *Early June*.—This variety, as its name imports, is ready for use in June, at the North. Flavor good.

3. *Early Sugar Loaf*.—The heads of this variety are not so firm as those of most other sorts; and, except for variety, it is not desirable for many parts of the country, as hot weather deteriorates its quality.

4. *Early Flat Battersea*.—This sort is most excellent, while young, even before it becomes hard. It continues fit for use longer than any of the early kinds.

5. *Large French Oxheart*.—A superior variety for profitable cultivation.

6. *Large York*.—This variety is larger and somewhat later than the Early York, and, from its endurance of heat, it is well adapted for the South.

7. *Large Flat Dutch*.—This sort greatly resembles the English Drumhead, and like it, is cultivated for an autumnal field crop, and is much grown for shipping.

8. *Large Bergen*.—This is one of the largest and latest kinds. The heads are large, firm, and of excellent flavor. It is truly an American variety, keeps well, and is suited both for market and for the table.

9. *Large English Drumhead*.—This is a large fall and winter variety, good-flavored, and well adapted for shipping, or for northern use.

10. *True Green Glazed*.—This sort, as it is believed to withstand the attacks of the cabbage worm better than any other variety, is much cultivated at the South. In other respects, it has not much to recommend itself.

11. *Fine Drumhead Savoy*.—This is an excellent, tender

variety, suitable for winter use, and even improved in flavor by exposure to frost.

12. *Green Globe Savoy*.—This sort does not form a firm head like most other varieties; but, being tender and of good flavor, the entire leaves are used for cooking. It is quite hardy, and is improved by freezing.

13. *Red Dutch*.—This variety is much cultivated for pickling, and for tearing into shreds and eaten raw with vinegar. It is also of superior flavor when boiled.

14. *Kohl-Rabi, or Turnip Cabbage*.—This is a German variety, called *chou-rave* by the French, and *col de nabo* by the Spaniards. There are two kinds of this vegetable, the *Green* and the *Purple*. The stem swells out above the ground, resembling both the cabbage and the turnip. It may be sown with, and cultivated in the same manner as the Rutabaga.

CULTIVATION.—In order to produce a succession of crops, at least three general sowings are necessary. Near the latitude of the city of Washington, for early spring and summer use, the seed may be sown broadcast, in dry weather, from the middle to the end of September, in rich beds of light earth, first raking it in, and then compressing the surface with a roller, or gently beating it down with the back of a spade. If not followed by rain soon after, water the beds every other day until the seed comes up. By the end of October, the largest-sized plants will be ready to transfer to a rich, well-worked plot of ground, formed into deep drills, eighteen inches apart, set one foot asunder, on the southerly or easterly slope of each ridge, so that they may have the full benefit of the sun, and be sheltered by the tops of the ridges from the cold northerly or western winds. At the approach of the first severe frosts, let the plants be protected by laying straw across the drills, and thus let it remain until the return of spring, when they should be uncovered and suffered to remain until they are ready to lift. The balance of the plants may remain in the bed protected during the winter by erecting over them a "cold frame," affording them proper ventilation in the daytime, and keeping them closely covered at night.

In case a supply of plants have not been obtained by the above-described method, the seed may be sown in a hot bed about the middle of February.

For a late crop, the seed may be sown during the period of

flowering of our common orchard fruits (see table on page 8). In latitudes south of St. Mary's, in Georgia, cabbage seed may be sown every month in the year.

Cabbages require a rich soil, rather moist than dry. A clayey soil, well mixed with other matter, is perhaps the best. The ground, whether it be a clayey or a sandy loam, should be repeatedly ploughed and harrowed when comparatively dry, or, what is better, deeply spaded or trenched to the sub-soil. If intended for spring planting, let the land be thrown up into ridges in the autumn, in order to be mellowed by the winter frosts. The manure may either be dug or ploughed in; or it may be laid in the bottom of the drills just before planting, and covered by splitting each ridge between the drills.

Though cabbages seem to require much nourishment, they do not much impoverish the soil. They have been raised eighteen years consecutively on the same ground without a diminution of the crop. When closely planted, they form so close a covering for the surface of the ground, as to cause a putrefaction of the soil, which increases its fertility.

Transplanting may be done at such periods as circumstances will admit. In summer, when the weather is very dry and hot, the ground should be newly dug, the plants carefully lifted, having previously given them a copious watering, say an hour or two before, and their roots dipped into a soft puddle of cow dung, soot, or earth, at a moment before planting. Wet weather is regarded as favorable for the operation, unless the ground is naturally moist. In cases where the soil is quite dry, some fill the holes with water before the plants are set, which has a better effect than pouring water on them afterwards. Soap suds would be better than clear water for wetting the plants. If a hot sun cause them to droop, two shingles stuck into the ground will be a sufficient protection if they be on the south and south-west sides of the plants. Covering them with boxes or leaves of trees are bad practices. The rows in general garden culture may be two feet apart, and the plants eighteen inches asunder; but in fields, where large varieties are planted, the rows may be three feet apart, and two feet between the plants.

As the crop progresses, they must be frequently hoed, the weeds kept down, and the stalks protected from the winds by slightly earthing them up.

**PRESERVATION DURING THE WINTER.**—Preserving cabbages through the winter for the table is a matter of some difficulty in the middle and northern parts of the United States. A very good method is, to pull them up in dry windy weather, and let them lie a few hours with the roots upwards to drain. The later in the season they are taken up, the better, while the ground continues open. Let as much soil remain on the roots as possible; set them upright together in a cellar which is sufficiently cold to admit some degree of frost; and by this means, they will keep well until April. In warm cellars, the heads will soon decay.

---

## CAULIFLOWER.

<i>Brassica oleracea botrytis</i> ,.....	OF BOTANISTS.
Chou-fleur, .....	FRENCH.
Coliflor, .....	SPANISH.
Blumenkohl, .....	GERMAN.

THE cauliflower is one of the most delicate and curious of the whole cabbage tribe, the flower buds forming a close, firm, cluster, or head, white and delicate, and for the sake of which, the plant is cultivated.

There are only two distinct varieties, usually cultivated, the *Early London*, and the *Large Late Asiatic*.

**CULTIVATION.**—In the middle and northern divisions of the United States, there are two periods for sowing this vegetable. For spring and summer crops, September is the proper time; for late autumn ones, the period of the first appearance of the peach bloom (see table on page 8). In situations south of St. Mary's, in Georgia, the seeds may be sown every month in the year.

In order to grow this vegetable in perfection in the cooler regions of the Union, a rich bed of light earth, two feet deep, consisting of one third part of well-decomposed manure, should be formed in an open exposure, sheltered from the north-west, and protected by a close frame, covered with glazed sashes or prepared muslin shutters. Into these beds, transfer the young plants, on the approach of the autumnal frosts, setting them about eighteen inches apart each way. Give the



earth around them a gentle watering ; slightly press it down, and little or no more water will be required before spring. During severe winter weather, the frames must be surrounded with litter, and covered with mats or dry straw, taking care to give the plants in clear mild weather an abundance of fresh air. When the plants are in a growing state, they should never suffer for want of water, which may be known by the drooping of the leaves. Soap suds form an excellent liquid, with which they may be watered. In the regions of the South, little or no protection is required to prevent injury from frost.

In gathering cauliflowers, the head should be cut off, including several inches of the stalk, together with most of the leaves. If the flowers are liable to open too rapidly, they may be retarded several days, by folding the outer leaves over the heads.

---

## CARROT.

<i>Daucus carota</i> , .....	OF	BOTANISTS.
Carotte, .....		FRENCH.
Zanahoria, .....		SPANISH.
Mohre, gelbe Rube, ..		GERMAN.

THIS hardy biennial, says an eminent physician, "is a most wholesome culinary root ; it strengthens and nourishes the body, and is very beneficial for consumptive persons." As an agricultural plant, it is surpassed by no other root for feeding the cow or the horse.

The following are the leading varieties usually cultivated for culinary use :—

1. *Early Horn*.—This is the earliest of all the varieties, and is well adapted for any crop. It will grow on a thin soil, and may be sown in July on an onion field after the crop has been removed.

2. *Long Orange*.—This sort, from its great length and other valuable properties, is much cultivated as a standard crop.

3. *Large White Belgian*.—This variety is much cultivated by the French, for seasoning in soup, but is not so nutritious as the above, and does not keep so well.

4. *Blood Red, or Purple*.—This sort is very fine-grained and sweet, and is much esteemed at the South.

5. *Large Altringham*.—This variety differs but little from the "Long Orange," and is excellent for keeping and general use.


CULTIVATION.—For an early crop, the seed should be sown in a warm border, as soon as the season will admit, say on or a little before the flowering of the peach (see table on page 8); but, for a general crop, it should be sown in calm weather, in shallow drills, half an inch deep, and from nine to twelve inches apart.

A deep, light, rich, sandy soil, well manured with half-rotted dung, is to be preferred, thoroughly broken and pulverized with a fork or spade. As soon as the plants are up, sufficiently large to be wed, they should be thinned out from three to six inches apart, according to the variety and the size they are intended to grow. In the course of the season, they should be frequently hoed, whether they are weedy or not, as stirring the earth around them is essential to their growth.

As soon as the leaves begin to turn yellow, the roots are ready to harvest. Let them be taken up in dry weather, cutting off the tops an inch from the roots. Those intended for winter use may be packed in dry earth or sand, and stored in a cool cellar, protected from the frost.

---

## CELERY.



<i>Apium graveolens</i> ,.....	OF BOTANISTS.
Celeri,.....	FRENCH.
Apio,.....	SPANISH.
Sellerie,.....	GERMAN.

CELERY is a hardy biennial, native of Britain, and known in a wild state by the name of *Smallage*. When cultivated and properly blanched, the stalk is sweet, mild, and crispy, being very palatable either in a raw or a cooked state. In Europe, they enumerate several varieties, only three of which have been generally cultivated:—

1. *White Solid*.—This is the variety generally grown, on account of its clear, white color, and solid, crispy stalks.

2. *New Silver Giant*.—This sort is much esteemed on account of its large size, and its white, round, crispy, and solid stalks.

3. *Large Manchester Red*.—This variety also grows to a large size, differs but slightly from the preceding except in color.

CULTIVATION.—The seed may be sown in the Middle and Northern States, with slight forcing, from March until the first or second week in May. It may be sown in drills six inches apart, in a hot bed or a rich mellow border, after the manner of cabbage seed, watering moderately in dry weather, both before and after it is up. As soon as the plants are two or three inches high, they may be transplanted into a nursery, three or four inches apart, in a sunny situation, into temporary beds formed of old hot-bed dung or well-rotted stable manure, mixed with one fourth of its bulk of finely pulverized earth. These beds should be laid six or seven inches thick on a plot of ground having a surface made hard by compression, in order to prevent the pushing of tap roots, and thereby prevent the celery from running to seed the following spring. The nursing plants should be watered daily until they have taken firm root, and as often afterwards as the dryness of the weather may require.

As soon as the plants have acquired a height of six or eight inches, they may be removed in monthly succession from June till September, into a soil rather moist and rich in vegetable mould, but not rank from new or unfermented dung. Previous to the last transplanting, the ground should be thoroughly worked with the spade or plough, to a depth of twelve to eighteen inches, and then be divided into trenches twelve inches deep, eighteen inches wide, and four feet apart from centre to centre. The trenches should next be filled nine inches deep, with a compost of well-rotted dung, mixed with one fourth of its bulk of strong sandy loam. The plants should then be taken from the nursery beds, with as much soil as will conveniently adhere to their roots, and after removing the side shoots from the stems, they may be planted nine or ten inches apart in the centre of each trench, watering them as often as the weather may require, until they are ready to earth up.

As the plants in the trenches rise from ten to fifteen inches high, commence the operation of "earthing up" for blanch-

ing; but never do this while they are wet. In the first two mouldings, the earth should be sparingly raised to the stems, forming a slight ridge on each side of the rows, leaving a hollow to receive the full benefit of the waterings or rain. When the plants become strong enough to bear a mould six inches in height, the earth may be drawn up equally on each side, preventing it as much as possible from falling into the "hearts" of the plants by keeping closely together the outer leaves. This may be done by tying them together by long bands of bass matting, untying them as fast as the plants are earthed up, which should be repeated once or twice a fortnight until they are ready for use. The width of the top of the ridges should gradually be diminished until they are at last drawn to a thin edge near the tips of the plants. By these means, they may be well blanched and ready for the table by the end of September.

---

### COLEWORT, OR COLLARDS.

<i>Brassica oleracea</i> , .....	OF BOTANISTS.
Choux-verts, .....	FRENCH.
Bercetas, .....	SPANISH.
Braunkohl, .....	GERMAN.

CABBAGE plants, used before heading, are called *Collards*. Any of the early varieties will answer the purpose by sowing the seed in spring or summer, and transplanting a foot apart. Rape may be cultivated for the same use.

---

### CORN SALAD.

<i>Fedia olitoria</i> , .....	OF BOTANISTS.
Mache, .....	FRENCH.
Valeriana, .....	SPANISH.
Ackersalat, .....	GERMAN.

CORN salad, *Fetticus*, or *Lamb Lettuce*, is cultivated as a winter or spring salad.

CULTIVATION.—Sow in rich soil from the beginning to the

end of September, in shallow drills, one fourth of an inch deep and six inches apart. Cover lightly, and if the weather be dry, compress the ground by a roller or with the feet. Keep the plants clear of weeds, and cover them with litter or straw, on the approach of continued frost. When wanted for use, remove the covering, and pluck, (not cut,) off the leaves. If the winter is mild, little or no protection will be required.

### CRESS, OR PEPPERGRASS.

<i>Lepidium sativum</i> , .....	OF BOTANISTS.
* Cresson, .....	FRENCH.
Mastuerzo, .....	SPANISH.
Kresse, .....	GERMAN.

THE Garden Cress, or *Peppergrass*, is a hardy annual, cultivated in gardens for the young leaves, which are used in salads, having a peculiarly warm and grateful relish.

The varieties most esteemed are the *Curled leaved* and the *Broad-leaved Garden*. The true *Water* or *Winter Cress* is entirely a different plant, which belongs to another family, cultivated by sowing the seed on the margins of running water, near springs that do not freeze hard.

CULTIVATION.—Common cress may be cultivated precisely in the same manner as parsley. In order to have a constant supply, in perfection, frequent sowings should be made, which, if done in hot, dry weather, should be sown in the shade of trees, or protected by brush or netting from the direct rays of the sun.

### CUCUMBER.

<i>Cucumis sativus</i> , .....	OF BOTANISTS.
Concombre, .....	FRENCH.
Pepino, .....	SPANISH.
Gurke, .....	GERMAN.

THIS, like many other esculents, has been divided into a number of varieties and sub-varieties, the greater portion or



which could easily be dispensed with. Those principally grown for useful purposes, and which are regarded as amply sufficient, are as follows:—

1. *Early Frame*.—This variety is a standard sort for the table as well as for pickling.

2. *Early Russian*.—This is the earliest variety known. It sets in pairs, the first blossoms usually producing fruit. It makes the smallest class of pickles, or may be employed on the table when green.

3. *Early Cluster*.—As its name implies, this sort grows in clusters near the root. It is very prolific, and is principally valued for its early maturity.

4. *Early White Spin*.—This is regarded as one of the best kinds for the table. It is well adapted for forcing, a prolific bearer, and is much sought after by marketmen, from long retaining its freshness.

5. *London Long Green*.—An excellent variety, often growing a foot in length. It is esteemed both for pickling and for the table.

6. *Short Green Prickly*.—This is a good variety for the table and for pickling, and is similar in its character to the “Early Frame.”

7. *Extra Long Green Turkey*.—This is one of the longest edible varieties, sometimes growing to twenty or more inches in length. It contains but few seeds, and may be pickled for immediate use.

8. *Gherkin or West-India*.—This sort is very small, ovoid in shape, and covered with numerous little spines, which cause it to resemble a burr. It is quite late, containing a large number of seeds, which are very slow to vegetate. It is of little use except for pickling, and not much used at that.

CULTIVATION.—The cucumber is usually grown by two general methods—by open culture, and under frames. To have young cucumbers in February or March, is too difficult an operation to detail here; but those who command a few loads of warm horse manure can have them from April to October.

For open culture, sow at the period of the flowering of the apple and the pear, (see table on page 8,) in slight hollows, four feet apart, eight or nine seeds to a hill, in warm, rich, mellow soil, well pulverized, and incorporated with hog manure or half-rotted farmyard dung. The seeds are to be preferred when two or three years old. Three or four plants are

sufficient to remain in each hill. Hoe them often; cut away the weeds; earth up; and water in dry weather. As soon as the vines have made three rough leaves, nip off the points to make them branch out and accelerate their fruit.

Cucumbers intended for pickling may not be sown before July.

## EGG PLANT, OR GUINEA SQUASH.

<i>Solanum melongēna</i> , .....	OF BOTANISTS.
Melongene, .....	FRENCH.
Berengena, .....	SPANISH.
Tollapfel, .....	GERMAN.

THE egg plant is much esteemed by some persons, while others cannot endure it at all. It is usually cut into thin slices and fried, when it has a taste resembling that of oysters. It is also used in stews and soups. The following are the principal varieties cultivated for economical use:—

1. *Large Purple*.—This variety is more generally cultivated, and may be known by its color and size.

2. *White*.—From this variety, the name of “Egg Plant” is derived, which, in a half-grown state, somewhat resembles a hen’s egg, both in color and in size.

**CULTIVATION.**—This vegetable being of a very tender nature, requires the aid of a hot bed in the Middle and Northern States; but south of St. Mary’s, in Georgia, it is adapted to open culture. The seed should be sown on a gentle hot bed, early in March, on a light, rich, mellow soil, giving them a sprinkling of water when the soil appears dry, and keeping the frames close, for a few days, until they come up, after which, they should be aired during the day, covering the glass in cold nights. As soon as the plants are two inches high, let them be thinned out to three inches apart, or transplant them into another bed. From the beginning to the middle of May, they may be transplanted into a warm rich border, frequently watered, hoed, and kept clear of weeds.

For a late crop, sow in April, in a warm border, in hills two feet apart, and cultivate as above.

## ENDIVE.

<i>Cichorium endivia</i> ,.....	Or BOTANISTS.
Chicorce, .....	FRENCH.
Escarola, .....	SPANISH.
Cichorie, Wegwarte, .....	GERMAN.

THIS is a hardy annual, cultivated mostly for a winter salad. There are several varieties, as the *Broad-leaved*, the *White Curled*, and the *Green Curled*, the latter of which is the most esteemed.

CULTIVATION.—For an early crop, sow in broad drills, one foot apart, early in July; and if dry weather ensues, water the young plants until they take firm root. Thin them out when about two inches high, ten inches apart, and keep them free from weeds by stirring the earth around them with a hoe. For a late crop, sow about a month later. As soon as the leaves are about eight inches in length, they may be blanched in dry weather, in a similar manner as directed for celery, which will require about ten days in warm weather, and about double that time when it is cool.

In order to have it in perfection during the winter, endive should be planted in frames, in August, and there suffered to remain; or they may be transferred from the seed beds with a quantity of earth attached to the roots about the beginning of November. The plants should be kept rather dry during the winter, as they are liable to become damp. Give plenty of sun and fresh air in mild weather, and protect them from heavy rains and frost. In blanching, never tie up the leaves in a frozen or a moist state. They are sometimes blanched in winter by covering them with boxes or pots, instead of earthing them up.

## INDIAN CORN.

<i>Zea mays</i> , .....	Or BOTANISTS.
Mais, .....	FRENCH.
Maiz, .....	SPANISH.
Mais, türkische Weizen, ...	GERMAN.

THIS excellent vegetable is universally cultivated in all the

habitable regions of the United States, forming a popular dish by boiling when green. When planted at proper periods, it can be obtained suitable for the table from early summer till the appearance of frost. There are numerous varieties, but among those suitable to be used in a green state, the four following are regarded as sufficient:—

1. *Early Sweet*.—This variety may be known by its red cob. It is fine-flavored, and is fit for boiling as early as any other kind.

2. *Large Sweet or Sugar*.—This sort contains eight rows, with, a long red cob, well filled, and is one of the best varieties for a general crop.

3. *Early White Flint*.—This is a valuable variety, with a flinty, transparent kernel, when dry, and is particularly valuable for field culture.

4. *Early Tuscarora*.—This sort has a large kernel, and remains a long time in a boiling condition. It succeeds best when planted wide apart, in a warm, rich soil.

CULTIVATION.—The planting may take place on the opening of the peach blossom, (see table on page 8,) and may be continued at intervals until July. The ground must be in good condition, well worked, and made rich by manure. The corn should be planted in hills from three to four feet apart, with five or six kernels to each hill. After it is up, it must be hoed and kept clear of weeds. At the second and third hoeings, the earth should be formed into broad hills, close around the stalks, in order to protect them against accident from high winds.

## KALE, OR SEA KALE.

<i>Crambe maritima</i> , .....	OF BOTANISTS.
Chou marin, .....	FRENCH.
Breton de mar, .....	SPANISH.
Meerkohl, .....	GERMAN.

THIS vegetable is closely related to the cabbage tribe, and is cultivated for its blanched shoots, which are cooked like asparagus, or are boiled and served up with gravy and toast.

The *Green Curled Scotch* variety is regarded as the best.

CULTIVATION.—In the middle and northern regions of the

United States, the seed may be thinly sown in March, April, or May, in drills one inch deep and a foot apart. If the weather be dry, water freely. Thin out the plants two or three inches apart, and keep them clear of weeds by hoeing. In the October or November following, cover over the crowns of the roots with a few inches of earth. Early the next spring, trench a plot of light sandy loam, fifteen inches deep, well manured and incorporated with a bushel of common salt to each square rod. Form it into beds, and plant the roots two feet apart, with their crowns two inches below the surface. With proper management in watering and keeping the beds free from weeds, and preventing the plants from running to seed, they will continue in perfection twelve or fifteen years. For winter and spring use, the plants may be brought forward by hand glasses, or by glazed muslin frames.

The plants which are not forced may be blanched by covering them with eight or ten inches of sand or fine light soil, early in the spring. Strong sprouts will rise, of a clear white color.

---

## LEEK.

<i>Allium porrum</i> ,.....	OF BOTANISTS.
Porreau, .....	FRENCH.
Puerro,.....	SPANISH.
Porree, Lauch,.....	GERMAN.

THE leek is a hardy biennial, belonging to the onion family, which attains perfection in size for culinary purposes the first year. The whole plant is eaten in soups, &c., and by some persons it is boiled and eaten with meat.

The two principal varieties cultivated for use, are the *Large London* and the *Large Scotch* or *Flag*.

CULTIVATION.—The seed may be sown any time during the flowering of our common orchard fruits (see table on page 8). Sow thinly in a light bed of rich ground, in drills, six inches apart, and half an inch deep. Cover them lightly, and beat the ground with the back of a spade. Soon after the plants are up, thin them to an inch apart; and when about eight inches high, transplant them in moist weather, in as rich a soil

as possibly can be made, in drills, a foot apart, three or four inches deep in the ground, and eight inches asunder from plant to plant. If the weather be dry, give them a copious watering. Before transplanting, shorten their roots to about an inch from the plant, and cut about two inches from the extremity of the leaves.

In the course of the season, keep down the weeds by frequent hoeing. On the approach of hard frost, take up enough for winter use, and store them away in a cool, dry cellar, packed in sand.

## LETTUCE.

<i>Lactuca sativa</i> ,.....	OF BOTANISTS.
Laitue,.....	FRENCH.
Lechuga,.....	SPANISH.
Lattich, gemeine Kopfsallat,..	GERMAN.

THIS is unquestionably the best of the salading vegetables. Numerous varieties are cultivated in Europe, and in this country; but many of them are not adapted to hot, dry temperatures. The following are deemed sufficient for general use:—

1. *Early Curled Silesia*.—This variety is esteemed for its strong growth, large, loose, crispy heads, which retain their flavor even into July, when nearly every other kind fails.

2. *Early White Cabbage or Butter*.—This is a very early sort, well adapted for forcing in hot beds. The color is light yellow, or pale green.

3. *Fine Imperial Head*.—This is one of the best varieties for general use. It hearts well, and is esteemed for summer growth.

4. *Large Green Head*.—This is a hardy sort, low in habit, with round heads and leaves. It is tender, of good flavor, and well adapted for early summer use.

5. *Ice Head*.—This variety resembles the preceding in color and form, when young, but runs to seed without heading.

6. *Brown Dutch*.—This kind is very hardy, and resists the severity of the winter without much, if any protection.

7. *Large India*.—This is the only kind that remains per-



fect during the heat of summer; but it is much too coarse for the table when the finer sorts are to be obtained.

8. *Ice Cos*.—This is a small, brittle variety, with crispy, ice-looking leaves, having rather loose, oblong heads.

9. *London White Cabbage*.—This is a large-headed variety, with crispy leaves, well suited for early summer use.

CULTIVATION.—For ordinary open culture, commence sowing as early in the spring as the ground will admit, and continue to sow at intervals until June or July, in order to keep up a succession of crops.

For early winter use, very good lettuce may be had by sowing about the middle of autumn, in frames, in a sheltered situation, covering them with glass, glazed muslin, or boards, when the weather becomes cold. In mild days, give the plants plenty of air; if boards are used, remove them to admit the light.

The varieties of *Cos* lettuce can only be successfully grown by sowing late in September, protecting them in winter, and transplanting early in the spring.

Lettuce delights in a deep, rich soil, not too heavy and moist, which should be well dug and thoroughly pulverized at the time of putting in the seed. It should be thinly and evenly sown, in shallow drills, nine or ten inches apart. Cover the seed lightly by raking or otherwise, and if the weather be dry, beat the ground gently with the back of a spade. When the young plants have grown to a height of about an inch, thin them out about two inches apart. As soon as they begin to touch each other, give them another thinning, when they can be transplanted to other ground, or be brought to the table for use. As lettuces are somewhat troublesome to transplant, during warm weather, late spring and early fall sowings should be made where they are intended to grow, and thinned out as they advance in growth. Deep and frequent hoeing is indispensable in all cases to secure a good crop.

## MUSK MELON.

<i>Cucumis melo</i> , .....	OF BOTANISTS.
Melon muscat, .....	FRENCH.
Melon almizclado, .....	SPANISH.
Bisammelone, .....	GERMAN.

THE term "Musk Melon" is often applied to all the melons of this species, from the peculiar scent of one of its varieties. The flesh of most of them, when well matured, is truly delicious, and may be eaten with ginger, pepper, sugar, or salt. Its nature is cooling, wholesome, and nutritious. There are many varieties in cultivation, but without artificial aid in protecting them from heavy rains and the scorching sun, very few of them are worthy of the gardener's care. Those in general use, and most esteemed, are as follows:—

1. *Green Citron*.—This variety is roughly netted all over, of a pale yellowish-green when ripe, and grows to a good size. It has a thick, green, melting flesh, highly flavored and very sweet.

2. *Pine Apple*.—This is an oval fruit, roughly netted, of a dark green when ripe, with a thick, firm, sweet, juicy flesh.

3. *Skillman's Fine Netted*.—This is a small rough-netted variety, flattened at the ends, with a green, thick, firm, delicious and sugary flesh. It is the earliest of the green-fleshed kinds.

4. *Nutmeg*.—This variety is of a larger growth than the "Pine Apple," more globular in its shape, and like it, the flesh is green and highly flavored.

5. *Large Yellow Cantaloupe*.—This has a round-netted fruit, slightly ribbed, of a good size, having a thick, salmon-colored, and musk-flavored flesh. It is rather earlier than the green-fleshed kinds.

6. *Large musk*.—This is the largest variety cultivated, deeply ribbed, and of a long oval shape. The flesh is salmon-colored, thick, and of a peculiar musky flavor. In its green state, the rind is made into "mangoes."

CULTIVATION.—This melon, as well as the watermelon, is cultivated in almost every respect like the cucumber. Hence, a repetition of the modes of management would be unnecessary here.

## WATER MELON.

<i>Cucurbita citrullus</i> ,.....	OF BOTANISTS.	.... RHH
Melon d'eau,.....	FRENCH.	.... RYRRH
Zandia, Patillas,.....	SPANISH.	.... RRR
Wassermelone,.....	GERMAN.	.... RRR

THE water melon is purely a tropical plant, and is highly esteemed in all warm climates for its refreshing coolness and delicious flavor. The following are the principal varieties cultivated in the United States:—

1. *Mountain Sprout*.—This is a long striped variety, having a bright-red flesh and light-colored seeds. It is regarded by many as the best variety in cultivation.

2. *Mountain Sweet*.—This is a fine melon, as good, perhaps, as the preceding, and well worthy of cultivation.

3. *Long Island*.—This is a common sort, having a red flesh and grey seeds. It grows either round or long.

4. *Spanish*.—This variety is round, of a dark-green color, having a very thin rind, with a bright-red flesh and black seeds. It does not grow so large as some other kinds, but is more rich and sugary in flavor, and commands a higher price.

5. *Citron*.—This kind uniformly grows smooth and round, striped or marbled with light green. The flesh is white, solid, and of a poor flavor. It is used exclusively for preserving in the form of citrons.

CULTIVATION.—See cultivation of the cucumber, the modes of which are the same as the melons.

## MUSTARD.

<i>Sinapis alba et S. nigra</i> ,.....	OF BOTANISTS.
Moutarde,.....	FRENCH.
Mostaza,.....	SPANISH.
Senf, Mostrich,.....	GERMAN.

THIS well known annual is extensively cultivated as a pot herb, for salad, and for the seed, the latter of which is extensively used for medicinal purposes and for flavoring pickles.

There are two species. The *White*, which is principally employed for garden purposes, and for the seed, which is used medicinally. The *Black* or *Brown* is of the same flavor, and is considered equally as efficacious as the "White."

**CULTIVATION.**—This vegetable, when employed as a salad, is cultivated in the same manner as recommended for cress. As a field crop, intended for seed, it should be sown as early in the spring as the soil will admit. It succeeds best in a fine, rich, mouldy loam, in which there is a regular supply of moisture. The seed may be thickly sown, broadcast, at the rate of fifteen to twenty quarts to an acre, lightly harrowed or brushed in after the manner of sowing flax. It requires no further attention than thinning out the larger weeds until ready for harvest

---

### NASTURTIIUM, OR INDIAN CRESS.

<i>Tropæolum majus</i> ,.....	Of	BOTANISTS.
Capucin,.....		FRENCH.
Nasturcio, .....		SPANISH.
Kapersinerblum, .....		GERMAN.

THIS is a hardy annual, much cultivated in gardens for salads and pickles, and for the gay colors which enliven its vines. The flowers and young leaves have a sharp, warm taste, resembling the curled cress. The seeds, when gathered in a green state, on a dry day, and pickled in vinegar, form an excellent substitute for capers.

**CULTIVATION.**—The seeds may be sown during the period of the flowering of the common orchard fruits, (see table on page 8,) in a warm, rich soil, in shallow drills, six or eight inches from a building, wall, or fence, on which the vines may be trained; or it may be sown in open gardens or fields in drills two feet apart, and cultivated in the same manner as peas. They require to be hoed frequently and kept free from weeds.

## ONION.

<i>Allium cepa</i> ,.....	OF BOTANISTS.
Oignon,.....	FRENCH.
Cebolla,.....	SPANISH.
Zwiebel,.....	GERMAN.

THE onion forms one of the principal crops of the kitchen garden, and is somewhat extensively cultivated in the field for the supply of our home markets, as well as for those of the West Indies and elsewhere. There are a multitude of varieties, or sorts, of onions in cultivation, among which the following are selected as the most important:—

1. *Early Red*.—This variety originated in Wethersfield, and is rather smaller, flatter, and lighter-colored than the “Large Red.” It is close-grained, heavy, very productive, and ready to harvest in July.

2. *Wethersfield Large Red*.—This is a very hardy sort, of large size, deep-red color, fine-grained, and nearly round in shape. It is very productive, of good flavor, and keeps well. Ripe in September.

3. *New Danvers Yellow*.—This variety originated in Danvers, Massachusetts. It is quite thick, of a straw color, mild in flavor, ripens early, and keeps well.

4. *Yellow Silver-Skinned*.—This sort is rather flat in shape, of a strong flavor, hardy, productive, and keeps well.

5. *White Portugal*.—This variety is very large and white, globular in form, mild in flavor, productive, but will not keep well beyond autumn or early winter.

CULTIVATION.—The onion should be sown in the middle and northern regions of the United States as early in the season as the ground will admit, say from the middle of March to the middle of April.

The soil most congenial to the growth of this vegetable is a deep, mellow loam, resting on a dry bottom, and however rich it may be, it requires more or less manure for every crop, whether it is cultivated on the same ground several years in succession or not.

Previous to sowing, the ground should be well prepared by digging or ploughing, and afterwards thoroughly levelled with a harrow. A liberal dressing of very old barnyard or pigsty

manure should then be slightly worked in, and the ground raked even and compressed by a roller, or beaten with the back of a spade. The ground being thus prepared, may next be divided into beds, four feet wide, with one-foot alleys between, for garden culture, and then marked off in shallow drills, from seven to twelve inches apart, into which the seed may be thinly sown, say half an inch asunder, and firmly trodden in with the foot, or beat in with the back of a spade. Next, a small quantity of fine earth, taken from the alleys, may be sprinkled over the seed, and finally evened with a coarse-toothed rake. For field culture, where many acres are to be seeded at one time, these beds may be evenly sown broadcast, but not too thick, after which they may be compressed with a roller or trodden with the feet, and then slightly covered with fine earth from the alleys, and levelled with a rake. In performing this operation, the teeth of the rake should be set wider apart than usual; otherwise, the seed will be drawn into heaps, and cause irregularity in the crop.

Soon after the plants are up, they should be carefully cleared of weeds, and be frequently hoed during the season. When they are three inches high, thin them out to two inches apart. Nothing further will be required than keeping them free from weeds by hoeing, which must strictly be attended to until the onions are ready to harvest.

In wet seasons, and sometimes from late sowings, onions are liable to grow thick-necked. In such cases, they should be gently bent down with the head of a wooden rake, which will check their growth, and cause them sooner to mature.

---

### OKRA, OR GOMBO.

<i>Hibiscus esculentus</i> ,.....	OF BOTANISTS.
Gombo,.....	FRENCH.
Quimbombo,.....	SPANISH.
Gombo, .....	GERMAN.

This plant is somewhat extensively cultivated for its green seed pods, which are put into soups, or stewed by themselves, and served up with butter. There are two varieties, the *Green* and the *White*.



**CULTIVATION.**—The seeds may be sown at the period of the flowering of our common orchard fruits (see table on page 8). It should be thinly scattered in shallow drills, two feet apart, in a dry, warm soil, and lightly covered. If cut off by late spring frosts, plant again.

After the seed is up, thin out the plants to nine inches apart; hoe them frequently, and draw up a little earth to the stems as they progress in their growth.

The pods should be gathered, when quite green, and when they are about an inch and a half in length.

## PARSLEY.

<i>Apium petroselinum</i> .....	OF BOTANISTS.
Persil, .....	FRENCH.
Perejil, .....	SPANISH.
Petersilie, .....	GERMAN.

THIS esculent is cultivated for garnishing food and for flavoring soups, stews, &c. It also counteracts the smell of the breath if taken after eating onions.

The principal varieties in use are the *Plain* or *Common*, and the *Double* or *Curled*.

**CULTIVATION.**—The curled variety is the most desirable, and should be sown in drills a foot apart, half an inch deep, as early in the spring as the ground will admit. The seed should be soaked in warm water a few hours previous to sowing. No further care is required than thinning out the plants and keeping them free from weeds.

## PARSNIP.

<i>Pastinaca sativa</i> , .....	OF BOTANISTS.
Panais, .....	FRENCH.
Chirivía, .....	SPANISH.
Pastinakwurzel, .....	GERMAN.

THE parsnip is a biennial plant; that is, lives two years from the sowing of the seed, and like the onion, the beet, the carrot, and the turnip, dies. It is principally used at the table with

boiled meats, though it makes an excellent concomitant with other meats, when thinly sliced and dipped in a batter, and fried brown after it has been boiled. The best variety in cultivation is the *Long Smooth*.

**CULTIVATION.**—The soil and culture of this vegetable do not differ essentially from those of the carrot. A deep, rich, sandy loam, trenched to a depth of eighteen or twenty inches, is suitable for its growth. In other respects, it may be managed like the carrot.

## PEAS.

<i>Pisum sativum</i> ,.....	OF BOTANISTS.
Pois,.....	FRENCH.
Guisantes,.....	SPANISH.
Erbisen,.....	GERMAN.

THE pea is a hardy annual; it has been cultivated from time immemorial. There are numerous varieties, from which the following have been selected as among the best for general use:—

1. *Extra Early May*.—This variety is valued principally for its early growth, and uniform maturity.

2. *Early Warwick*.—This is a standard sort, ripening about a week later than the preceding. It is an excellent bearer, and of good flavor.

3. *Early Frame or June*.—This variety grows to about the same height as the Early Warwick, but ripens about a week later. It is very prolific, and of excellent quality.

4. *English Early Double-Blossomed Frame*, valued for its early maturity, abundant yield; and good flavor.

5. *Early Charlton*.—This variety is of strong growth, a prolific bearer, and early in its maturity.

6. *Dwarf Blue Imperial*.—This is a good bearer, with large pods and seeds, and well adapted for summer use. The seeds are blue, and a little flattened.

7. *Large White Marrowfat*.—This variety is of strong growth, with large, rough, round, well-filled pods, and is extensively cultivated.

8. *Black-Eyed Marrowfat*.—This is a productive variety, well adapted for summer use.

9. *Early Champion of England*.—This is a prolific bearer, and is worthy of general cultivation.

10. *English Cedo-Nulli*.—This is a very good pea, and like each of the preceding varieties, has its admirers.

11. *Dwarf Sugar*.—This variety is of strong growth, a late and moderate bearer, having long pods, and is generally used as “snaps,” when half-filled.

12. *Thurston's Reliance*.—A good variety, esteemed by some for general use.

13. *Early Washington*.—This variety somewhat resembles the Early Warwick, with which it is sometimes confounded.

14. *Early Prolific*.—As its name implies, this pea is esteemed for its early growth and productive yield.

CULTIVATION.—For early growth, peas should be sown as soon after the ground becomes light and dry as possible; that is, as soon as the frost is out. The situation should be sheltered from the cold northerly winds, and fully exposed to the sun during the early and middle parts of the day, say along the southerly side of a tight board fence, a hedge, or a stone wall. For summer crops, they may be sown during the period of the flowering of our common orchard fruits (see table on page 8).

The soil for peas should be moderately rich, by manuring the year previous to sowing. They may be sown in double drills, about three feet apart; and, of the running kinds, they require to be bushed or propped when about six inches high. In all cases, they should be kept clear of weeds, and earthed-up at least twice in their growth.

---

## PEPPER.

<i>Capsicum annuum</i> , .....	OF BOTANISTS.
Piment, .....	FRENCH.
Pimiento, .....	SPANISH.
Spanische Pfeffer, ...	GERMAN.

THERE are numerous varieties of the pepper cultivated in gardens for pickling the young pods, or small berries, when they are green, and for their ripe fruit, which is dried and afterwards employed for hot seasoning in soups, &c.

The following are the chief sorts usually cultivated for domestic use:—

1. *Long Cayenne*.—This is a long, red, tapering variety, of a dwarfy growth, and of the very hottest quality. It is used for making pepper sauce, and for seasoning.

2. *Cherry*.—Small, of uniform shape, resembling a red cherry—very hot.

3. *Large Squash or Tomâto*.—This variety resembles the Squash Tomato in color, shape, and size, is very prolific, mild in flavor, and excellent for pickling.

4. *Large Bull-Nose or Bell*.—This variety is inclined to a bell shape, or rather of a square form. The rind is thick, pulpy, of a mild flavor, and preferred to all others for pickling.

5. *Large Sweet Mountain*.—This somewhat resembles the last-named variety, but is much larger. It is used for the same purpose.

6. *Sweet Spanish*.—This variety occurs in two forms, one large and long, and the other squarer in shape. They are entirely free from pungency, and are used for garnishing meats and for salads.

CULTIVATION.—For early use, sow in a hot bed, or in a pot of rich earth set in a warm window, in February, March, or April. Transplant in rich beds, in drills, eighteen inches apart, and ten or twelve from plant to plant. As the plants progress, hoe them and keep free from weeds. For open culture, the seed may be sown at the period of the flowering of our common orchard fruits, in drills a foot and a half apart. At the first or second hoeing, thin out the plants, leaving one to every ten inches or a foot.

## PUMPKIN.

<i>Cucurbita pepo</i> , .....	OF	BOTANISTS.
Potiron, .....		FRENCH.
Calabaza amarilla, .....		SPANISH.
Kurbis, .....		GERMAN.

THE pumpkin is a valuable vegetable, most generally cultivated on the farm rather than in the garden. It is much esteemed in some parts of the country for baking and for making into pies. It also forms admirable food for stock.

The two principal varieties in cultivation are the Connecticut *Field* and the *Large Cheese*.

CULTIVATION.—The pumpkin may be cultivated like cucum-

bers or melons, and sown at the same time. If grown by themselves, they may be planted in highly-manured hills, eight feet apart, leaving, at the second hoeing, two or three plants in each. In some parts of New England, they are dropped in the hills of Indian corn, one seed to every other hill, and are allowed to run between the rows.

---

### RADISH.

<i>Raphanus sativus</i> ,.....	OF BOTANISTS.
Rave,.....	FRENCH.
Rabano, .....	SPANISH.
Radies, Rottig,.....	GERMAN.

THIS plant is valued for its agreeable, pungent root, which forms a grateful relish, either mixed with salads, or eaten with bread and butter in a raw state.

There are numerous varieties in cultivation, among which the following are regarded as the best:—*Early Scarlet Turnip*, *Early Short-topped Long Scarlet*, *Long Salmon*, *White Turnip*, *Yellow Turnip*, *Black Fall Spanish*, and *Beck's Superb*.

CULTIVATION.—For a spring crop, the radish should be sown in a light, rich, dry, sandy loam; but for later growth, a cool, deep, moist soil is preferred. The seed may be sown in a hot bed in February, March, or April, and transplanted in an open enclosure fully exposed to the sun, and sheltered from cold northerly winds. For later growth, the seed may be sown broadcast, in warm borders, in April and May, or in drills, nine inches apart. Fall radishes may be sown in August and September. If the nights prove frosty, the plants may be covered with straw or mats, which should be taken off during the day. In all cases where the season is dry, radishes should be watered, in order to keep up a luxuriant growth.

---

### BLOODWORT, OR ENGLISH DOCK.

*Rumex sanguineus*,.....OF BOTANISTS.

THIS is a beautiful dock, growing wild in many parts of England, and is now cultivated in gardens for its fine deep-red appearance, and for the use of its young tender leaves for "greens."

## RHUBARB.

<i>Rheum rhabonticum</i> ,.....	Of BOTANISTS.
Rhubarbe, .....	FRENCH.
Ruibarbo, .....	SPANISH.
Rhabarber, .....	GERMAN.

THERE are several varieties of this esculent cultivated under the name of "Pie Plant," and have become quite common in our gardens. The early growth of the stems affords facilities for making pies and tarts, long before green fruit can be obtained, which, together with the close resemblance to the taste of the gooseberry, render it almost indispensable to every garden or farm.

The two varieties most sought for in our market are the *Early Tobolsk* and *Myatt's Victoria*.

CULTIVATION.—Rhubarb may be propagated either by seeds or by a division of the roots. The seed should be sown as early in the spring as the ground will admit. It should be thinly scattered in drills, one inch deep, and a foot apart, evenly covered.

The soil should be light, dry, and well manured. If the weather proves dry, the drills should be watered. When the young plants are an inch high, thin them out to four inches apart. In the course of the season, hoe them freely, and keep them clear of weeds. In the middle and northern parts of the United States, they should be transplanted in October in a highly manured plot of ground, trenched and well worked, eighteen inches deep, in rows four feet apart, and two feet from plant to plant, with the crown of each plant below the surface. Then cover them four or five inches thick with straw or leaves, to protect them from winter frosts and snows. No further culture will be required than uncovering the roots in the spring, and keeping the plants free from weeds.

## SPINACH.

<i>Spinacea oleracea</i> ,.....	Of BOTANISTS
Epinard, .....	FRENCH.
Espinaca, .....	SPANISH.
Spinat, .....	GERMAN.

The spinach, or spinage, has long been cultivated, and its use is well known: There are three varieties in cultivation,



which differ in the size and shape of the leaves, namely, the *Round*, or *Summer*, the *Prickly*, or *Fall*, and the *Broad-Leaved*.

**CULTIVATION.**—For winter and early spring crops, in the middle and northern parts of the United States, sow about the end of August, and again about six weeks after. For summer use, sow about the end of March or the beginning of April, and continue sowing until the middle of May. The seed may be sown broadcast, or thinly in drills a quarter of an inch deep, and nine inches apart.

It will succeed in any common garden soil, but the more it has been previously enriched by manure, the better, and the more vigorous will be the crop. The seeds will come up in ten or fifteen days after sowing. If the young plants grow too thick, they should be thinned out as soon as they have three or four leaves an inch in breadth. No further cultivation will be required than to keep down the weeds.

---

### SALSIFY, OR VEGETABLE OYSTER.

<i>Tragopogon porrifolius</i> ,.....	OF BOTANISTS.
Salsifis, .....	FRENCH.
Barba cabruna,.....	SPANISH.
Bocksbart, .....	GERMAN.

THIS is a hardy carrot-rooted plant, which, from the flavor of its root when fried, has a fancied resemblance to oysters. Hence its name.

**CULTIVATION.**—This plant may be cultivated precisely in the manner as parsnips, and may remain in the ground during winter.

---

### SQUASH.

<i>Cucurbita melopepo</i> ,.....	OF BOTANISTS.
Courge, Potiron,.....	FRENCH.
Calabaza,.....	SPANISH.
Kurbis,.....	GERMAN.

THIS esculent, so general in its use, is too well known in this country to require a description. There are several varieties in cultivation, both for summer and winter use, among which the following are the most important:—

1. *White Bush Scollop*.—This variety is flat, scollop-shaped,

and of a light cream color. In the Southern and Middle States, it is called the "Patty-pan Squash." It is used for boiling when young, and for pies when ripe.

2. *Early Yellow Bush Scollop*.—This resembles the preceding in shape, but is smaller, and is of a yellow color.

3. *Early Bush Summer Crookneck*.—This variety is of a small size, a bright yellow color, with a crooked neck, covered with warty excrescences. It is very productive, and is regarded as one of the best summer sorts. As it is very hard, when ripe, it can be eaten only when young and tender.

4. *Fall or Winter Crookneck*.—This is much cultivated in New England for fall and winter use. It yields abundantly, and is excellent for pies.

5. *Autumnal Marrow or Boston*.—This is a popular variety in Boston market, keeps well in winter, and boils dry.

6. *Lima Coconut*.—This is a long squash, of a blue color, fine-grained and sweet. It will keep well during the winter, if well ripened, and boils dry.

CULTIVATION.—The squash is cultivated precisely in the manner of the pumpkin, to which the reader is referred.

## TOMATO.

<i>Solanum lycopersicum</i> ,.....	OF BOTANISTS.
Tomate,.....	FRENCH.
Tomate, .....	SPANISH.
Goldapfel, .....	GERMAN.

THE tomato is so widely cultivated, and so extensively used in almost every family throughout the civilized globe, that it is now regarded as almost indispensable to every garden and farm.

There are several varieties grown by amateurs. The following are considered as the best and the most profitable for domestic use :—

1. *Large Deep-furrowed Red*.—This variety is the largest in cultivation. It is early, productive, and of good flavor.

2. *Round Red*.—This sort, which is a few days later than the above, is smooth, round or flattened in shape, and is highly valued for cooking or eating raw.

3. *Large Yellow*.—This differs but slightly in appearance

from the "Round Red," except in color. The flesh is firm, which renders it suitable for preserving.

4. *Small Yellow*.—The shape of this variety is uniformly oval, and perfectly smooth and fair. It is used chiefly for pickling or making preserves.

5. *Cherry*.—This kind much resembles the cherry in color and shape. Hence its name. It is mostly cultivated for pickling and preserves.

CULTIVATION.—In the Middle and Northern States, the seeds should be lightly sown and thinly covered in a hot bed, in March. Soon after they are up, they should be freely aired during the middle of sunny days. When the plants are about four inches high, they should be transplanted into other frames, under glass, about two inches apart, where they are to remain until they are removed into open ground. From the first to the middle of May, they may be transplanted to a well-prepared bed, on the southerly side of a tight board fence, a wall, or other erection, at a distance of about three feet from plant to plant, after which, they should be frequently hoed and cleared of weeds. If the weather be dry, water them every other day. No further care will be necessary before the fruit matures.

For open culture, the seed may be sown during the period of the flowering of our common orchard fruits (see table on page 8). Sow in broad hills, three or four feet from centre to centre, and when the plants are about four inches high, thin them out to four in each hill. In other respects, cultivate as above.

## TURNIP.

<i>Brassica rapa</i> , .....	OF BOTANISTS.
Navet, .....	FRENCH.
Nabo comun, .....	SPANISH.
Steckrube, .....	GERMAN.

THIS well-known plant is cultivated for its bulbous roots, both in the garden and the field. They are principally used in this country with boiled meats, or mashed, strained and mixed with butter, milk or cream. They also serve as an excellent seasoning in corned-beef "hash." There are numerous varieties in cultivation for spring, summer, autumn, and winter use, among which the following are deemed the best:—

1. *Early Flat Dutch or Spring*.—This is a white, flat, juicy variety, of medium size, and is fit for use only while tender and young. It is of rapid growth, and may be sown either in spring or fall.

2. *Early Red-Top Flat*.—This is a beautiful turnip, having a flat bulb, purplish red above ground, with a small tap root.

3. *Strap-leaved Red-Top Flat*.—This is an excellent fine-grained, rich, butter-flavored variety, reddish or purple above ground, and well adapted for spring and late fall culture. It is regarded as one of the best of the flat-bulbed turnips for culinary use.

4. *Early Garden Stone*.—This is an English variety, of a roundish shape, firm texture, and of rapid growth, when sown in the fall.

5. *Large English Norfolk*.—This is one of the largest of the white flat varieties, rather irregular in shape, and requires to be sown earlier than the table sorts. It is principally grown for feeding to stock, and may stand in the field during the winter at the South and some parts of the West.

6. *Large White Globe*.—This variety is smooth, globular in shape, a vigorous and uniform grower, well adapted for field culture.

7. *Large White Flat*.—This variety, which is rather irregular in shape, is well suited for stock-feeding. In the South, and some parts of the West, it may be allowed to remain standing during the winter.

8. *Long White or Cow-Horn*.—This sort is rapid in its growth, of a good size, sweet, fine-grained, keeps well, when early secured from frost, and is excellent for culinary use.

9. *English Stubble*.—This is another excellent sort, well adapted for fall culture.

10. *Long Tankard or Hanover*.—This is a long, thick, white variety, growing a third or more out of the ground, and is somewhat soft, and liable to injury from frost.

11. *Early Yellow Dutch*.—This is of a smooth, round form, with a sweet, firm, yellow flesh, and keeps well.

12. *Yellow Stone or Orange*.—This variety is roundish in shape, very hard, yellow-fleshed, and green above ground. It keeps well.

13. *Yellow Aberdeen or Bullock*.—This is roundish in form, with medium-sized roots, firm in texture, and good to keep.

14. *Long Yellow French*.—This is a long carrot-shaped

variety, of a deep yellow, close-grained, hard, and good for keeping. Its root grows entirely in the ground.

15. *Dale's Hybrid*.—This variety, which was obtained by intermixture with the Swedish turnip, has rather large, oblong roots, of a yellow color, and of an irregular shape. It is principally used for feeding stock.

16. *Ruta-Baga*.—The variety of the turnip forms a distinct class, which, perhaps, more properly belongs to the cabbage tribe. It is very hard, close-grained, hardy, and will keep well during winter and spring.

CULTIVATION.—For an early crop of turnips, sow as soon as the frost is out of the ground, either broadcast or in drills, ten inches apart, and a fourth of an inch deep. Rake the surface of the ground even after sowing, and if the weather be dry, gently beat it down with the back of a spade. For fall crops, sow from the middle to the end of July.

The soil most congenial for the turnip is a gravelly, sandy loam, or a soil that is rich, with a dry bottom. Unless the ground be "folded" or burnt over, it should be reduced to a finely-pulverized state. If possible, the young plants should be forced into a rough leaf, in order to secure them from the attack of flies. This may be done by soaking the seed for thirty-six hours in a solution of one pound of Peruvian guano and ten gallons of water; or a gallon of water infused with a quarter of an ounce of chloride of lime. The ground should be kept clean and free from weeds, both before and after the seed is sown; and the oftener the ground is stirred in dry weather, the better will it be for the crop.

The *ruta-baga* should be sown from the twentieth of June to the first of July, in drills, two feet apart, and when hoed, thinned out to ten inches from plant to plant. The ground should be rich and dry.

---

## SWEET HERBS.

SAGE, Summer Savory, Sweet Basil, Thyme, Lavender, Lemon Balm, &c., &c.



# POPULAR FLOWERS.

**BALLOON VINE**—Propagated by seeds, in an ordinary garden soil.

**CALLIOPSIS DRUMMONDII**.—This is a showy annual, of easy culture in a common garden loam. The *Calliopsis atkinsonia* may be cultivated in the same manner.

**CAPE MARIGOLD** (*Calendula hybrida*).—This is a hardy annual, of easy culture, in a loamy soil. The seeds may be sown in the spring.

**CHINA ASTER** (*Callistema*).—This is a hardy annual, of various hues, forming one of the most beautiful ornaments of the garden. It is of easy cultivation from seeds, which may be sown in the spring in any common garden soil.

**CLARKIA ELEGANS**.—A beautiful annual, with rose-colored flowers. It may be propagated from seeds sown in the spring, in a light rich soil.

**CONVOLVULUS MAJOR** (*Ipomœa purpurea*).—This is a handsome annual, cultivated by seeds sown in spring, in a light rich loam.

**CYPRESS VINE**.—A beautiful tender annual climber, with small crimson flowers, well adapted for fancy training. It may be cultivated from seeds, sown in the spring, in a common garden loam. They should be soaked or steeped in tepid water a few hours before sowing.

**DOUBLE LARKSPUR** (*Delphinium consolida*).—This is a tall, hardy perennial, with long spikes of light blue flowers. It may be propagated from seeds sown in the spring, in a common garden soil, or from a division of the roots.

**FRENCH MARIGOLD** (*Calendula officinalis*).—A beautiful annual, with yellow showy flowers, spotted or striped with purple. The seeds may be sown in the spring, in a light, rich garden soil.

**GOLDEN BARTONIA**.—This is a hardy annual, much admired for its golden yellow flowers. The seeds may be sown in the spring, in a warm, sandy loam.

**MARVEL OF PERU** (*Mirabilis jalapa*).—An ornamental perennial, with various-colored flowers. It may be propagated from seeds sown in the spring, in a warm garden loam. The roots may be taken up in the fall, like those of the Dahlia, or they may be covered with litter during the winter to protect them against frost.

**MIGNONETTE** (*Reseda odorata*).—This is an annual, but may become perennial by keeping it in a hot-house during the winter, and not allowing it to ripen its seeds. It may be sown in the spring, in a light garden loam, manured with leaf mould.

**MOURNING BRIDE** (*Scabiosa atropurpurea*).—This is both annual and biennial, according to the treatment. It produces beautiful, rich purple flowers, of different shades, and may be sown in the spring, in a common garden soil.

**PORTULACA**.—This is a beautiful, showy annual, with crimson, scarlet, white, or yellow flowers, which blossom during the summer. It may be propagated from seed, sown in spring, or early summer, in a light garden loam.

**PRINCE'S FEATHER** (*Amaranthus hypochondricus*).—This is a hardy annual, of easy culture, from seeds, sown in a light, rich soil.

**PURPLE CANDY TUFT** (*Ieris*).—A showy annual, of low habit, producing a profusion of purple blossoms. The seeds may be sown in a common, light loam, from April to July.

**SNAP DRAGON** (*Antirrhinum majus*).—This is a hardy perennial, which may be cultivated in a common garden soil, either from cuttings or seeds.

**SWEET ALYSSUM** (*Alyssum maritimum*).—This is a hardy annual, of low growth, with sweet-scented white flowers. It may be cultivated from seeds sown in the spring, in a common soil.

**TEN WEEKS' STOCK** (*Matthiola annua*).—A hardy annual, of various colors, cultivated from seeds in a common garden soil.

**WALL FLOWER** (*Cheiranthus chieri*).—A splendid biennial, admired for its varied colors and agreeable odor. The seed may be sown in spring, in a light, sandy soil. In autumn, transplant in pots, and remove them to a cellar for winter protection.

**WHITE CANDY TUFT** (*Ieris*).—A showy annual, not much unlike the "Purple Candy Tuft," except in the color of the flowers.

**WHITE CANTERBURY BELL** (*Campanula medium*).—A beautiful biennial, highly valued for its large blue or white, bell-shaped flowers, of easy culture, and may be sown in rich borders, where it is to remain.